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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/982,886 | 10/22/2001 | Seiji Hashimoto | 35.C15892 | 7524 |
| 5514 | 7590 | 03/09/2006 | EXAMINER | |
| FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112 | | | VIEAUX, GARY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2612 | |

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,886

Applicant(s)

HASHIMOTO, SEIJI

Examiner

Gary C. Vieaux

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 3, 2005 has been entered.

Election/Restrictions

Applicant's election of the second Species, readable on claims 10-13 in the reply filed on January 30, 2006 is acknowledged. Because applicant did not distinctly and specifically point out any supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP §818.03(a)).

Response to Amendment

In response to the Office Action dated June 30, 2005, the Title and claim 10, as applicable by election, has been amended.

In response to Applicant's amended Title, the Examiner, in light of the restriction and election of species, finds the amended title of the invention is not descriptive. A new title is required that is indicative of the invention to which the claims are directed. Therefore, this objection is maintained.

Response to Arguments

Applicant's arguments with respect to claims 10-13 have been considered but are moot in view of the new ground(s) of rejection.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 10, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiki (US 5,990,948) in view of Examiner's Official Notice.

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Regarding claim 10, Saguki discloses an image pickup apparatus comprising a plurality of charge detecting circuits (fig. 10 indicator 405) that detect charges and supply corresponding signal levels to a plurality of subsequent A/D conversion circuits (fig. 10 indicator 406) which in turn generate digital signals from the differences between the signal levels supplied by said charge detection circuits and noise levels of the related photoelectric conversion units (figs. 10 and 11, col. 8 line 25 – col. 9 line 26.)

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However, although Saguki teaches the signals being read from a CCD solid-state image pickup device (fig. 8, col. 7 lines 44-57), Saguki is not found to expressly disclose the solid state image pickup element being formed on a single semiconductor chip in which the photoelectric conversion units that are arranged two-dimensionally.

Nevertheless, Examiner's Official notice is taken regarding forming a said solid-state image pickup element, including photoelectric conversion units arranged two-dimensionally, on a single semiconductor chip; a concept that is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the components on a single semiconductor chip in order to reduce the circuit scale as well as the cost of a solid-state camera.

Regarding claim 11, Saguki in view of Examiner's Official Notice discloses all of the limitations of claim 11 (see the 103(a) rejection to claim 10 supra) including teaching an image pickup apparatus wherein said A/D conversion circuit comprises a sequential-comparison-type circuit ('948 – indicator 406, col. 9 lines 7-12.)

Regarding claim 12, Saguki in view of Examiner's Official Notice discloses all of the limitations of claim 12 (see the 103(a) rejection to claim 10 supra) except for expressly teaching the apparatus further comprising a lens adapted to form a light image on said solid-state image pickup element, and a signal processing circuit adapted to process a signal from said solid-state image pickup element.

Nevertheless, Examiner's Official notice is also taken regarding both the use of a lens adapted to form a light image on said solid-state image pickup element, and a signal processing circuit adapted to process a signal from said solid-state image pickup element; concepts that are both well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a lens adapted to form a light image on said solid-state image pickup element

in order to properly focus an image, as well as to have employed a signal processing circuit adapted to process a signal from said solid-state image pickup element in order to enhance or process the resulting image, e.g. white balance, lossless compression, etc.

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Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugiki (US 5,990,948) in view of Examiner's Official Notice as applied to claim 11 above, and further in view of Nam (US 5,477,070.)

Regarding claim 13, Saguki in view of Examiner's Official Notice discloses all of
10 the limitations of claim 13 (see the 103(a) rejection to claim 11 supra) except for teaching an apparatus wherein said CCD and said charge detection circuit are separated by a well.

Nevertheless, Nam is found to disclose a charge diffusion region 18 and an end
of the CCD (marked by clock pulse $\Phi 1$) being separated by an n-well (fig. 3 and col. 2,
15 lines 15- 21). It would have been obvious to one of ordinary skill in the art at the time of invention to use the n-well separation of Nam in conjunction with the apparatus as taught by Saguki in view of Examiner's Official Notice, for the benefit of reducing pulse noise produced by the signal processing circuit.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakuragi et al. (US 6,518,910.), of which Hashimoto is a common inventor, discloses noise removal in conjunction with sequential comparison analog to digital conversion.

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Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary C. Vieaux whose telephone number is 571-272-7318. The examiner can normally be reached on Monday - Friday, 8:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen T. Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Gcv2

Gary C. Vieaux
Examiner
Art Unit 2612


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER